

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a schematic of the cased elbow well drilled into a bed of a subterranean material, wherein the elbow well comprises an injection tube, a production casing, and a production tube that is connected to a pump to help lift the subterranean mixture in the cavity to a collection location, here, the earth's surface.

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Figure 2a is a cross-sectional view of the initial cavity in the elbow well.

Figure [3]2b is a cross-sectional view of the cavity in the elbow well, wherein the cavity is larger than in Figure 2a.

Figure [4]2c is a cross-sectional view of the cavity in the elbow well, wherein the cavity is larger than in Figure [3]2b.

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According to another embodiment of the invention, seen in Figures [(2-4)]2a-2c, the cavity 50 expands as more fluid 10 is injected into the well 15 dissolving more subterranean material 25. The cavity 50 expands outward from the end of the elbow well 15, and therefore the cavity 50 propagates back to the well 15. In the event that a collapse of the cavity 50, or other obstruction, reduces the flow of the mixture 55, the injection tube 45 is perforated in some embodiments to permit further amounts of the mixture 55 to be collected. Alternatively, rather than perforation, the injection tube 45 is withdrawn, partially, until debris from the collapse is clear and flow of the mixture 55 is raised to an acceptable level.

TITLE: APPARATUS, METHOD AND PROCESS
SINGLE WELL SOLUTION-MINING
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SHEET 2 OF 2

Replacement Sheet

Stage 1: Initial Cavity Formation

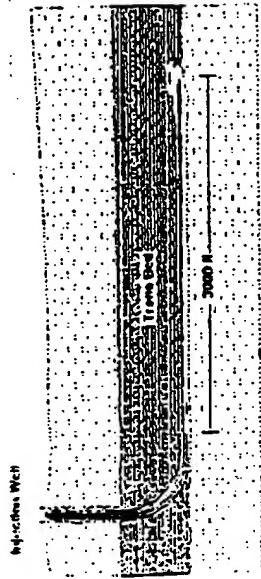


Fig. 2a

Stage 2: Cavity Formation across Shale Partings

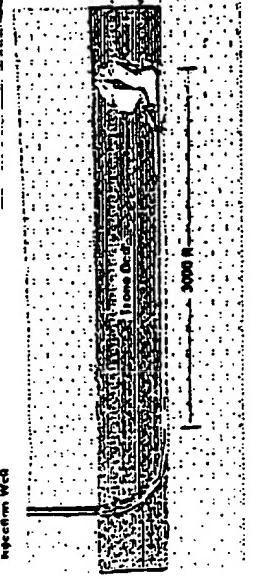


Fig. 2b

Stage 3: Tubing Pull-Back or Perforation to Extend Cavity

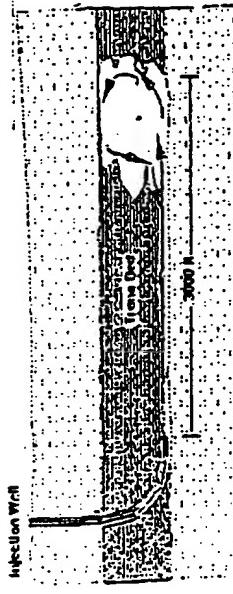


Fig. 2c

Cross Section

Plan View

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